

THE TECH CHRISTMAS

VOL. XXII.

NO. XI.

• 1905 •

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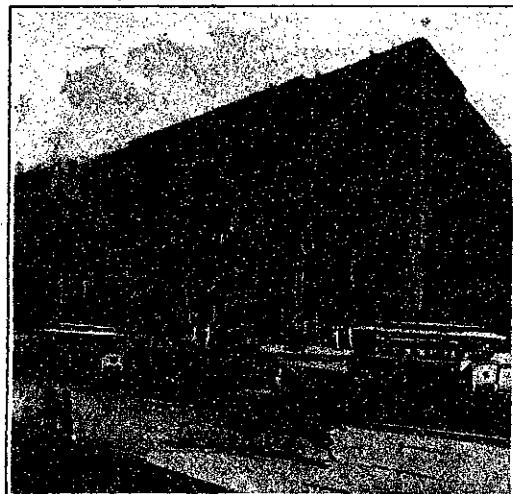
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For the benefit of students THE TECH will be pleased to answer all questions and obtain all possible information pertaining to any department of the College.

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OUR AMBITION AND ITS BEGINNING.

IF we graduate from Tech and know no more of our professors than we have gathered in the lecture rooms, we have failed in half the aim of our course of study. We have come here to follow Dr. Edward Everett Hale's advice to "Speak each day to one you know to be your superior." The tendency of the times here is to a closer and more democratic intercourse between the undergraduates and the professors than has ever before been possible. Every effort of those in power here is directed toward

furthering this end, and with the great assistance of Dr. Pritchett, Dean Burton, Dr. Tyler and Professor Bates, we have been able, in this issue, to start our efforts. Through such articles as we now present the students may be reached in an unofficial way, on their own territory and in their own paper. We hope that we shall be able in the coming months to publish such articles frequently and to make THE TECH a recognized medium through which the Faculty may talk to the men whom they have to teach not only to be engineers, but to be men.

AT ZURICH.

AT Zurich, any text-book whatever may be taken into an examination. The theory is that in future work a student will have these books at his command and that a knowledge of their proper use is of greater advantage than the memorizing of methods and formulæ. If the theory of the American examination system were carried out to the last degree, the libraries of the Institute would be deserted by the instructing staff, whose only use for a book would be to keep up with the absolute advance of their subject. This is, of course, absurd and impossible, but there are few of us who have not, at times, doubted the value of much of the material which we are called upon to memorize. Cannot the time spent in learning by heart what has already been put in print be spent to greater advantage otherwise? It is a great question. At Zurich they believe it can be. Do the Germans differ widely from the Americans? We are told that they do not. We have grafted many of their ideas

and methods into our system; is it not possible then, that, with the growth of the science of technical education, Tech will adopt this view, too? We cannot do it in a day or in a year, but while we are talking of honor systems and the abolition of examinations we can do no harm by reviewing other methods in other schools.

American Institute of Electrical Engineers.

A meeting of the Boston branch of the American Institute of Electrical Engineers was held in Lowell Building on the evening of Wednesday, Dec. 9, on which occasion a paper on the comparative behavior of floating and booster controlled batteries on fluctuating loads was read by Mr. Burleigh. Following the discussion of this paper the Edison Automobile Battery was exhibited. Representatives of both the Edison Company and Chloride Accumulation Company were present and many interesting features were brought out in discussion of automobile batteries. Dr. Kenneally gave a clear and concise *resume* of the principles underlying the Edison and the Exide batteries.

The Athletic Contest.

The first of the all-round athletic contests took place in the gymnasium on Thursday, Dec. 10. One point was given for each inch over four feet six inches in the running high jump. R. D. Farrington, '05, made the best score, twelve points, with a jump of five feet, six inches. G. A. Curtis, '04, was next, with nine points; R. D. Emerson, '05, followed with eight points; J. C. Baker, '04, seven points; Le B. Turner, '05, seven points; W. C. Young, '06, six points; R. C. Albro, '07, H. B. Conover, '07, G. D. Luther, '07, C. R. Haynes, '04, each had five points to their credit; J. J. Thomas, '07, E. P. Noyes, '07, W. S. Moore, '07, F. W. Barrows, '07, and B. Bullard, '07, each had three points; J. Tetlow, '07, one point. This contest shows that, besides our old standbys, Farrington, Curtis, and Emerson, there are quite a number of new men of promise. The work of Albro, Conover, and Luther, all of 1907, was very good. Le B. Turner and J. C. Baker surprised their friends by clearing the bar

at five feet one inch. W. C. Young, '06, is a new man and has promise of good form.

There is a handsome set of silver loving cups to be awarded as prizes to the winners, and the running high jump gives promise of a very close competition in the events which are to follow.

Faculty Notices.

Petitions to drop subjects can no longer be entertained without explanation of lateness of presentation.

GENERAL GEOLOGY.

Professor Jaggar will resume his lectures Wednesday, Jan. 6. The Wednesday hour is changed to 4 P.M.

ENTRANCE CONDITIONS.

All entrance conditions are required to be made up in January, in accordance with the examination schedule to be posted later, except as postponement may have been granted by the Faculty in particular cases.

Entrance conditions in Algebra, English, French and German may be covered by good work in the corresponding first-year subjects. Students conditioned in these subjects should confer with their respective instructors as to the possibility of such excuse.

Y. M. C. A. Meeting.

About fifty men found Dr. McElveen a "past master in the art of conversation" on Tuesday evening, Dec. 8, at Tech Union. Instead of speaking on "Opportunities of College Men," as announced, he chose for a subject, "The Gospel of Gospels," as he called it. He pointed out in his characteristic manner that there are a great many gospels in the minds of people to-day; that some people believe proper legislation to be a panacea for all disorder and a check for all evil; others believe that in proper environment lies the secret of influencing men for good; still others regard education as the means by which men may attain best development of character. All of these help, and in no small degree, but the highest development, the noblest and manliest character is that attained by the true followers of the "gospel of gospels," that of Christianity — one that applies universally to industry, to society and to government.

The Choice of a Course.

At this time of year the first-year student of the Institute is apt to be thinking seriously as to which of the thirteen courses of the Institute he ought to pursue, if, indeed, he has not already made up his mind, before coming. In this respect he has greater freedom than the student in foreign technical schools, where the student must ordinarily decide before entering whether he will take one or another of the courses offered. While it is not possible to give any specific advice in this matter which will apply to all students, or perhaps to any large number of them, nevertheless a few general suggestions may be helpful.

First of all, a student will need to disabuse his mind of the idea which many have that these are separate and sharply divided courses. There is no such sharp line of division between many of the courses. The whole idea of the Institute rests upon the fundamental theory that the first two years, which are in large measure common to all courses, serve as a basis for them all; but even outside of this, there is no sharp line of division between civil engineering and mechanical engineering, or between mechanical engineering and electrical engineering, or between electrical engineering and mining engineering, although each has its distinctive features.

In a certain sense civil engineering is the basis of all, since it deals with the mathematical foundation and the general problems of surveying and the strength of materials, which enter into all branches of engineering; but with our increasing differentiation of professions, civil engineering has come to mean a less general preparation than it once did.

This fundamental fact being granted, and understanding that all these courses have much in common, the question of which one is most available will depend chiefly on two things. First, on one's own belief in his fitness for one kind of work, and second, on the general outlook which he may believe exists for men in this branch of engineering or technical work.

As to the first of these, the candidate himself ought to be able to speak more certainly than any one else can speak for him, although I am bound to admit that this is just the difficulty which many men find. Doubtless it is true that, for the average

man of fair ability, any one of a dozen occupations or professions may be equally available, and that his success would be about the same in any one of them; but the question of the personal fitness of a student for one or another is one which he himself can best settle, and concerning which I doubt if any one can give him any practical advice.

One element of choice which influences many in their attitude to this or that branch of engineering is the character of the life which its practice may impose. Thus, some branches of engineering will almost inevitably call for much travel and more absences from home than will some others. As to the opportunities for employment and promotion in the various branches of engineering and technical pursuits which are open to the Technology student, one can say quite frankly that the well prepared man can find an opening in any of them, and there is very little choice as to the readiness with which this opening may present itself. As far as we can foresee, the future of this country is to have a rapid physical development for a number of years to come. There may be temporary periods of financial depression, during which the onward march will be checked; but these, in the nature of things, will be but temporary. Technical graduates who are well prepared will find openings for advancement in whatsoever fields they may be masters of.

In addition to our own country it is likely that great opportunities for the engineer, for the chemist, for the biologist, will be found in China, Manchuria, and the eastern possessions of Russia. All this region is likely to see, in the next twenty-five years, a physical development which is most striking; and American engineers will be, of all others, most welcome. For this reason, if I were myself beginning engineering, I should learn Russian.

To sum up, the decision which must be made between different courses offered by the Institute must in the end rest largely upon the personal estimate of the student himself. If he has clearly defined ideas of what he wants to do, the question answers itself. If he has no such clearly defined ideas, then he may be sure that he cannot go far wrong to take any one of these engineering courses, which overlap and interlace each other, and all of which lead, if they are thoroughly followed out, to excellent opportunities in life.

HENRY S. PRITCHETT.

Summer Work for Undergraduates.

Employment during the long summer vacation is a necessity to many Institute students, but employment before graduation in the practical elementary work of his profession will be helpful to every engineering student.

It has always been customary for the heads of the different departments at the Institute to help undergraduate students to obtain employment, although such positions have never been guaranteed. Last year an attempt was made to organize something of an employment bureau in connection with the Dean's office. Probably some fifty students obtained positions through this office — about half the number who applied. By a wider advertising still better results may be hoped for this year. The attention of the student body is now called to the fact that Civil Service examinations are to be held next month for positions in the State and City Engineering Departments. These examinations are comparatively easy for Institute students, and if successfully passed there is a fair chance for employment. Civil Service examinations are also to be held next month in Albany, N.Y., for positions in connection with the new Barge Canal. These positions are intended principally for graduates, but appointments for the summer are also dependent upon the Civil Service examinations.

Circulars giving information as to the time and place of all these examinations have already been posted on the bulletin boards, and still further particulars can be obtained by applying at the Dean's office.

In general, it is true that graduates who have had the opportunity for practical work while still in college are better fitted for their profession than those who have used their summers simply for rest and recreation. They know that real work means they have usually gained valuable professional acquaintance, and on graduation may possibly find themselves being sought for to fill positions rather than seeking employment.

The kind of work generally open to college students in the summer is so different in character from the school work of the year, that it gives what is generally considered the best kind of rest — a change of work.

A. E. BURTON.

The Institute Calendar.

I believe the subject of this paper has the almost unique distinction of being of immediate interest not merely to every reader of this paper, but to every Tech inhabitant, from the president to the office boy, not forgetting such collateral groups as the boarding-house keepers, the laundrymen, etc. For the occupations of all these are affected by the Institute Calendar as by a sort of secondary, artificial system of seasons. The professor and the students may take liberties with the tabular view, though not, indeed, with impunity, but the manner of life in vacation and in term is not the same for either, nor for any of their numerous dependents. Interest in the calendar, while thus universal, is far from uniform. It may be safely said, however, that few students will refuse to sign a petition for a change of calendar, and few members of the Faculty will refrain from expressing divergent views upon any proposition connected with it. Not ignoring the fact that the interest of a paper should not — but may — be confined to its title, I will try to indicate some of the influences which have led to the existing conditions.

The present calendar represents, on the whole, a sort of equilibrium, not necessarily stable, among various forces, a variation in any of which may lead to changes.

The length of the year is determined, apart from general usage, by a belief that it corresponds with the maximum efficiency both of teachers, who must do much more than teach if they would teach best, and for maturing students, taking due account for both, of intensity of application during the school year. If the school year were lengthened with proportionate reduction of intensity of application, some might benefit — as some actually do, by taking summer courses — but there would be much disadvantage to those teachers and students who now make summer engagements of value in one way or another. The student of slender means would lose both in earning power and in increased cost of living.

The determination of the length of the school year thus represents a consensus of Faculty opinion, each member of the Faculty attaching such weight as he may to the considerations mentioned and, of course, to that of summer climate.

The ends of the school year being determined by its length and by climatic considerations, shall the

year consist of three terms, or of two? The usual answer by the college has been three, but the two-term colleges are important and tend to increase in number. Certain considerations are of exceptional importance at the Institute. The maintenance of our standard depends largely on the enforcement at the beginning of each term of requirements for admission to subjects, and on the scrutiny of records by the Faculty at the end of each term. The labor of faculty and administrative staff is very heavy and could scarcely be performed three times a year instead of two. If it is to be performed twice, an even division is far better than a one-to-two ratio. At the end of ten weeks many students would not yet have "found themselves;" at the end of twenty some would be past finding.

A division into equal terms separates the winter vacation from Christmas as the alternative for opening and closing the year about five weeks earlier than we now do, and even to make the division fifteen weeks in the first term and nineteen in the second would mean opening the year about Sept. 10, and closing about May 20. The second main fact is then the determination of the winter vacation in such a manner as to divide the working year in halves, by a vacation just about long enough to enable all to resume work with vigor.

Passing from elements determined freely by the Faculty, we come to the four legal holidays—Thanksgiving, Christmas, Washington's Birthday and Patriots' Day. Shall all or any be augmented by additional days? What shall also be said about the student institution, Junior Week? The Institute owes its foundation and continued existence primarily to the work done in and for it by its students. Every day taken out of its relatively brief school year diminishes the opportunities offered to some of its students, and this is particularly important in the case of laboratory work, when a single day may mean a fifteenth of the term's work. Certain economic laws are curiously distorted by occasional undergraduate reasoning. The student comes to the Institute for the sake of its opportunities for work, paying a considerable price in time as well as in money. Thereafter he none the less welcomes a partial withdrawal of the opportunity, and reluctance of the Faculty to grant it may even be deemed ungenerous. This is not in the least to deny the value

of certain temporary substitutes for work, but only to insist on their due subordination to it, and on the fact that an increase of short vacations during the year means logically a shortening of the long one in the summer, to the disadvantage of many of us.

How long should these short intermissions be, bearing in mind that increase in their combined duration will be either at the expense of the short school year or of the summer vacation? Some fifty per cent of the students live within a few hours' journey, and can reach home even for the isolated holiday. A smaller proportion live too far away or are too limited in funds to go home at all unless during the summer. The single day at Thanksgiving and Washington's Birthday represent one solution, the movable three days in April another, the even week at Christmas a third; each of these may be best for a particular minority of students. Beyond a certain limit, different for different persons, a few days' vacation becomes a harmful interruption rather than a means of recuperation. In general it seems to me that the normal student who has his work well in hand loses in momentum in a vacation of more than a day or two during the term somewhat more than he gains in recuperation. Here again, then, the decision by the Faculty must depend on a careful weighing of different interests more or less in conflict with each other.

It is not difficult to infer that the present or any other calendar is the result of numerous compromises and may exactly suit but a small minority. On the other hand, almost any stable calendar is better than one changing from year to year for temporary reasons, and a considerable burden of proof lies against any proposed change of the resultant of many years' experience and experiment.

One advantage of our January vacation may be worth mentioning at this time, only a month before that vacation comes. The attractions of the New England mountains for the vacation pedestrian in summer need no advocate. The end of January is not a less eligible season for a mountain outing, and the student who uses it thus for the first time will scarcely fail to gain a new appreciation of nature and quick exhilaration in the respite of work. But this "is another story."

H. W. TYLER.

The Question of Spelling.

Spelling may be an overestimated art; and there must, in the life of every instructor in English, be moments when it seems in a fair way to become an obsolete one. Modern short cuts to reading and the disappearance of the old-time drill on the sounds of letters have been responsible for a good deal of inaccurate spelling, and the whole tendency of modern education is to lessen the amount of accuracy in detail in everything. The technical student is held to sharpness in strictly technical work, but it is at the expense of constant vigilance and much effort on the part of the instructor. Orthography is unfortunately a subject which may be constantly abused without the knowledge of any teacher. The student often produces the impression of having taken his spare hours to perfect himself in the art of misspelling, and against such constant misuse of the English language no teacher can hope to be effective.

Some misspelling is simple carelessness. Other cases seem almost to have the air of being deliberate. In a notebook the other day I found the statement: "In those days there was no copyright to protect the playright;" in another: "It is said Shakespeare shot a deer and fled to London to escape the consequences;" in a third: "An iron pipe is lead from one boiler to the other." The first writer so ingeniously mixes his "right" and "wright," the second so improves upon the legend by making the poet guilty of manslaughter, and the third presents so pretty a paradox by having his pipe of two metals, that one might almost suspect intention. Second thought, of course, dissipates such an idea, and abundant examples prove that it is apparently as difficult for many students to spell as it is for them to refrain from laughter if a lecturer trips in a sentence.

The worst of the whole business is, that while correct spelling may not count for much in a man's favor, being taken for granted, errors in orthography are sure to tell so heavily against him. I was told recently of a case in which the choice between two engineers for a post with a large salary was decided against one of them — and he, my informant asserted, the better engineer of the two — by the fact that he had misspelled certain words in his letter of application. It sometimes seems as if the power of

putting letters together according to rule was made to bear the whole burden as a criterion of a man's intellectual accomplishments. Often it is so hard to judge a man's powers that this is used as the test in cases where such a method is conspicuously unfair. For this the graduate, facing life and obliged to take the world as it is, must be prepared. He may have any opinion he pleases about the justice of his being cast aside as an engineer because he cannot spell, but the fact remains that of this direful possibility he is in danger. Not every misspeller comes to grief in this way, it is true, but to the danger every one is exposed; and in a time when competition is so fierce as it is to-day, no student can afford to handicap himself with such a weakness.

The Mohammedans have a fable to the effect that a soul judged to eternal flame protested bitterly against the injustice of holding him responsible for things which he never dreamed would have serious consequences. "Did not you hear the preachers in the mosque every Friday telling you so?" he was asked. "Oh, yes, I heard them," was his answer; "but I thought they just said so in the way of their business." "They did," he was told; "and it was in the way of your business to heed what they said." The moral of which here is, that even a professional instructor in English, preaching the need of spelling correctly, is worthy of attention.

ARLO BATES.

The Civil Engineering Society.

The Civil Engineering Society was organized Feb. 13, 1889, for the purpose of bringing the students together, and of giving a clearer conception of what is expected of them in their future career.

From the very beginning the Society experienced a rapid and healthy growth, and has always received the hearty support of the entire Civil Engineering Department, as well as that of other departments. Membership is open to all men of both Courses I. and XI. after the Freshman year, and at present includes practically all the men eligible.

The meetings are generally held in Room 11, Engineering B, at 4.15 P.M., on Mondays. They are held as regularly as possible every three weeks. The lectures are not strictly technical, but treat of a very large variety of engineering projects, which appeal to the interest of all those who intend to

enter this line of professional work, as well as those who are actively engaged in it. They are given by men well fitted to talk upon the subject which they are treating, and of sufficient variety to touch all the important varieties of work which Courses I. and XI. men are liable to deal with. The greater number of the lectures are illustrated so as to give the hearers a clearer conception of the subject.

Several Smokers and an annual dinner are given every year, at which some eminent engineer or professional man gives an interesting talk, and then in the brief social time left the students have the opportunity to become acquainted with each other and the instructors of the course.

This year the Society is stronger than heretofore, and has been exceptionally fortunate in securing a choice lot of speakers.

On Oct. 19 Professor Swain, head of the Department of Civil Engineering, gave a very interesting and instructive talk on "The Opportunities of the Civil Engineer." In this he reviewed the entire engineering field, and showed the wonderful advance which this science has led to.

Mr. L. P. Wason (Tech '91), addressed the Society Nov. 9 on "The Harvard Stadium." He described the construction of the stadium from the beginning to the end, and showed the progress of construction, and the various difficulties met with, by numerous photographs taken at regular intervals during construction.

On Nov. 23 Mr. P. H. Dudley spoke to the Society. Mr. Dudley is a man of wide repute, and is an expert of experts in his line of engineering. He briefly told the history of railroading as pertaining to his line of work, and of the introduction of track test by the earlier methods, which were followed by his improved and valuable mechanisms. The lecture was well illustrated, thus enabling the lecturer to show his mechanisms and their operation in greater detail.

Thursday evening, Dec. 17, Dean Burton will be the speaker at the Smoker which is to be held at the Tech Union. The subject of the talk being "The Summer School of 1903," it will be illustrated, and promises to be an exceptionally interesting lecture. Members will undoubtedly realize the value of the work, and the great advantage which one can gain in summer school.

Among the speakers of the near future are, Mr. R. A. Shaler, "The East Boston Tunnel;" Mr. F. H. Snow, "Sanitary Engineer," and Professor Winslow of the Institute. The Society invites all who are interested in the lectures given, to attend.

HARRY M. NABSTEDT.

Mechanical Engineering Society.

The Mechanical Engineering Society is an organization of students in the Mechanical and Chemical Engineering Courses. Its active membership is undergraduate, although there is a considerable list of honorary graduate members. At the end of the school year of 1902-1903 it numbered one hundred and eight student members. Its present list includes one hundred and twenty-seven student members and a considerably increased number of graduate members.

The past history of the Society is one of many cycles of rapid development and as rapid dissolution, due to the varying interest taken in it by the students of the courses. These ups and downs have made it impossible for a definite and continued growth to take place, so that there are no traditions which have been handed down to guide the efforts and insure the usefulness of the organization. What the true function of the Society is and what its sphere of usefulness may be has not been entirely determined, particularly because of this lack of consistent development. Two things, however, seem to be possible to the Society, and they are, the monthly meetings, and the arrangement of trips to industrial plants.

The Society holds a meeting about once a month, at which a discourse is given, in most instances by a successful practicing engineer. The members have not only the opportunity of listening to, but of meeting him personally. The student is able to benefit by the advice of such proved men, and is able to put to them questions which mean much and are never answered in the class room. The student is also enabled at the meetings to meet his professors and instructors on a footing much less formal than is that of the daily contact in the work of the various courses. It is very desirable that this should be the case, and that the future may find the spirit growing. The period of sociability following the talk is very pleasantly spent. A little some-

thing to eat together, and a hearty song by the members gathered about a companion at the piano, does much towards that happy spirit of good fellowship of which we of Technology are just beginning to learn.

The next meeting of the Society is designed by the Program Committee to be a particularly attractive one. Mr. J. M. Dodge, president of the American Society of Mechanical Engineers, has promised to address the Society. Mr. Dodge is a fine speaker. His paper at the late meeting of the American Society on "The Commercial Value of a Technical Education" has attracted very general commendation.

Another line of work has been taken up by a special committee, Messrs. Charles, Tripp and Mr. J. C. Riley. The aim is to provide suggestions and information that are sufficient to enable students interested to visit most profitably some of the best examples of modern practice which are so plentiful in Greater Boston.

EVERETT O. HILLER.

Mining Engineering Society.

OFFICERS FOR 1903, 1904.

President—Ralph B. Williams.

Vice-President and Treasurer—Fremont N. Turgeon.

Secretary—Roy H. Allen.

EXECUTIVE COMMITTEE.

R. B. Williams, '04,
F. N. Turgeon, '04,

R. H. Allen, '05,
Eugene Burton, '05.

The Mining Engineering Society was organized in 1897 for the purpose of awakening and maintaining an active interest in the study of mining engineering among its members. The idea of the founders was to have papers read before the Society by its own members, thus giving valuable experience in the presentation of papers, in addition to the profit received by the hearers. It was soon found, however, that this plan could not be relied upon alone, owing to the pressure of work on the Seniors, on whom this labor of presenting papers largely devolved. The papers were interspersed with talks given by members of the Faculty and the instructing staff, whose work was closely connected with the subject of mining or metallurgy. For the past year or two nearly all the meetings have been addressed by members of the instructing staff,

no papers being presented by the student members. It is proposed to have, during the present year, a series of addresses before the Society by leading mining engineers resident in or near Boston.

The Society has a present active membership of about seventy-five, composed of students of mining engineering in the Junior and Senior classes. Students of mining engineering may be admitted to membership in the Society in the second term of their Sophomore year.

Roy H. ALLEN.

The Architectural Society.

The Architectural Society, though a professional society, has, perhaps, a more social character than any of the others at Tech.

During the year a dinner and frequent smoke talks are given. These latter are informal meetings, at which some man gives a talk to the Society, and light refreshments are served. Besides the regular business routine, a blue-print and tracing committee is maintained, which has prints of architectural subjects made and furnished to members at nominal prices.

But the most important work done is the publishing every year of a catalogue of the work of the department. The best and most interesting drawings are reproduced in half-tone, and the annual thus forms a valuable as well as an interesting record for the students and those interested in architecture generally. The Catalogue Committee of this year deserves very high praise for having produced the finest annual that the Society has yet issued.

JAMES M. F. BAKER.

The Chemical Society.

The Chemical Society might well be called the infant among the societies at the Institute, not by any means from a point of view of size, but from that of age. The first meeting was held at the Tech Union on Jan. 9, 1903, so that it will be observed that a year has not yet elapsed since its christening. To continue the metaphor we might say that the child is in a wonderfully flourishing and robust condition, considering the recent set-back it experienced at the graduation of 1903, when its growth

was stunted a little for a while. Last June the membership was sixty-three; it has already regained this number and one more in addition, showing that it has come to stay and that its friends are pleased with its behavior.

The purpose of the Society is to give the men a chance to improve their chemical knowledge by listening to experienced men on topics which have either some special commercial value, or are of general interest in the chemical world of the present. The speakers are not necessarily members of the instructing staff, but frequently talks are given by some of the men themselves in cases where they have had some practical experience along the line of their subjects. In the near future it is hoped that a new feature will be introduced and that occasional meetings will be held jointly with the Harvard Society. Arrangements are already in progress, in fact, for such a meeting, and it is anticipated that Dr. Richards of Harvard will speak.

The Society is not at all behind the others in the matter of spirit, but has plenty of push and is maturing faster even than its age would seem to permit. "Shingles" are about to be issued, which is an entirely new departure in this line, or perhaps better, a revival of an old-time documental form. The design is antique, but is adapted to the purpose in a most fitting manner.

W.M. H. KEEN.

The Electrical Engineering Society.

The Electrical Engineering Society of the Massachusetts Institute of Technology is, perhaps, one of the youngest *professional* societies at the Institute. Its parent, the Tech Electric Club, was formed by the Class of '89 during the Junior year, with nineteen charter members. The first meeting was held Oct. 25, 1888. Officers elected were: Mr. George E. Hall, president; Mr. F. M. Greenlow, vice-president, and Mr. H. M. Goodwin, secretary and treasurer. The Club grew as the Institute developed, and devoted its time to discussion of electrical subjects of student interest. At the beginning of the school year of 1902-3 it became necessary to reconstruct the Club. A new constitution was drawn up and the name, Electrical Engineering Society of the Massachusetts Institute of Technology, adopted. To

the Class of '03, which carried out this reconstruction, much credit is due. A friendly relation has been established between the Society and the Boston branch of the American Institute of Electrical Engineers.

The objects of the Society are to discuss electrical and allied engineering subjects; to have papers presented at its meeting by distinguished engineers working on the various problems connected with electrical engineering, and from time to time to visit generating plants and construction companies. To promote good-fellowship among the members is a pressing object always before the Society.

During the present year nearly fifty active members have been elected into the Society, making a total active membership of one hundred and five. The Society has been extremely fortunate this year in obtaining interesting speakers on most instructive subjects. At the first Smoker of the year, Mr. J. J. Stone, representing the Stone Wireless Telegraphy Company, gave an intensely interesting talk on "The Theory of Wireless Telegraphy." On the evening of Nov. 18 a talk on "Steam Turbines" was given by Mr. Charles Garrison, the New England representative of the De Laval Company. The theoretical considerations underlying the turbine principle were discussed. Two turbines were exhibited and minutely described. The meeting Tuesday evening, Dec. 15, with the president's address on his recent trip abroad, was the most successful meeting of the year. After the address the Society most heartily enjoyed the privileges of Tech Union, obtained for us by our guest and beloved president.

ROBERT PALMER.

The Naval Architectural Society.

The Naval Architectural Society was organized by the Class of 1901, in its Junior year, for the purpose mainly of promoting a closer social relation between the members of that course.

It has regular monthly meetings, two of which are used for dinners. At these dinners the members of the Society have had the pleasure of listening to a number of men prominent in naval architectural work. At the remaining meetings, however, they have been less fortunate in this respect, but this has been in a measure made up by talks by some of

its members on the yards at which they had spent their summers, together with many other interesting subjects.

In a school such as Technology, which offers so little opportunity for social intercourse among its students, too much cannot be said of the advantages of any organization which tends to overcome this, and in this way chiefly the Society has, by the frequent gatherings of its members, served the purpose for which the Class of 1901 organized it.

CHARLES L. STEINROK.

The Tech Show.

The Tech Show for 1904 will be continued along the same lines as in past years. Numerous innovations will be made, but taken as a whole, this year's Show will be best described as an improved 1903 Show. As last year, the Show will be entirely the work of Tech men.

The most important innovation to take place this year concerns the Board of Management. The Show has always been most democratic in character; every man trying for parts has been given an equal opportunity, irrespective of class, and the position which the Show now holds in our undergraduate life amply proves the wisdom of this system. For obvious reasons it has heretofore been impossible to extend this system to the management. The first years of the Show were, to say the least, experimental. Almost insuperable difficulties had to be overcome, and it was only by putting the responsibility into the hands of a few tried men that the Show was brought to its present position.

This year's change of policy in opening the under-managerships to competition, instead of having them filled by the retiring members, simply marks the Board's conservative policy and is in no way radical. The Show has now passed the experimental stage. The dangers which might have wrecked early Shows are now minimized, and it is only fair, following the tried policy of the Show, to open the management positions to competition.

This change of policy is also necessary from other standpoints. The responsibility of handling three thousand or more dollars, of dealing with approximately two hundred men, is real, and it is becoming more and more necessary that it be divided among a number of men. This fact will be marked this

year by an increase in the Board of Management. The result of this system should be to provide trained assistants for managers' positions. The Board of Management does not offer the glittering attractions which the Show itself provides; the man who takes up this work must be most unselfish of his own time and interests, but the training and satisfaction in handling men, in dealing with large interests, and the organization necessary for this, cannot help being of some use.

As to the Show itself, this year's play, which, as in past years, is a musical comedy, is well under way, and its name and authors will soon be announced. The management, again, however, most urgently requests any one who can write music or lyrics, or who has some suggestion in regard to "business" which might be introduced in the Show, to confer with them as soon as possible.

Active work on the Show will begin, as in past years, immediately after mid-years, and there is no apparent reason why this year's Show should not eclipse all others.

M. L. EMERSON.

Musical Clubs.

In summarizing the work of the Musical Clubs since the beginning of the school year there are two things to be considered: First, an inside view of the condition of the clubs, and second, the viewpoint of outsiders of the concerts given. Taken as a whole, the prospects of the clubs were very gratifying at the beginning of the year. A large number of men turned out with their mandolins and as a result Tech has an exceptionally fine Mandolin Club. On the other hand, the Banjo and Glee Clubs were not quite so fortunate in the number of applications. However, the material which did come out was of a high standard, and so both of these clubs can now give good account of themselves. The Glee Club has among its members a good soloist and quartet. At present the clubs are financially well situated, but their future success depends on the concert and dance which is to be given on Friday evening of this week in the New Century Building. Up to this time the only expense which the clubs have had has been music, which was covered by the dues, but the expenses to-morrow

night will be of a different nature and on a larger scale, so it is hoped that all Tech men who can will come to make it a financial success for the clubs, and indirectly show that such affairs can be profitably given throughout the winter.

Fobs, of a design already described in THE TECH, were given to the members this year. The design is neat and the idea, which is a new one, affords an incentive for those trying, other than the honor of making the clubs.

But two concerts have been given this year, the first on Nov. 19 at Marblehead, and the second on Nov. 23 before the North Gate Club of Newtonville. Musically the concerts were a success and socially they were all that could be expected.

The present officers of the M. I. T. Musical Clubs are: President, L. G. Wilson; business manager and treasurer, Louis Robbe; leader of Mandolin Club, Charles Mayer; leader of Glee Club, L. G. Wilson; leader of Banjo Club, Ralph Jackson.

LEWIS G. WILSON.

The Geological Journal Club.

The Geological Journal Club was organized early in October with twenty-seven members, most of whom belong to the Mining and Geology Departments of the Institute. Two officers were informally chosen: Dr. D. W. Johnson, president, and G. F. Loughlin, secretary.

Since the organization of the Club meetings have been held every Wednesday afternoon. A discussion follows every paper presented, both students and instructors taking an active part. The students, in fact, by their willingness to discuss the points which arise, have made the discussions one of the most important parts of the meetings. No time is wasted in the reading of minutes, but the hour is devoted to the presentation or reviewing of geological topics. The time allotted to a reader is ten minutes. At the close of every meeting papers are assigned to members.

The papers thus far presented, owing to the large proportion of mining students in the Club, have dealt mostly with economic geology and ore deposits; but due attention is to be given to all branches of geology—physiographic, dynamic, structural, chemical, economic, and organic, as well as mineralogy and petrography.

The advantages of the Club are many to all students taking courses which require study along geological lines. Those who present or review papers get accustomed to addressing an audience, learn how to answer questions offhand and to uphold their statements against objections and criticisms that may arise.

Social gatherings are held at the Tech Union from time to time, when only the funny side of geology is allowed. These gatherings give all a chance to become better acquainted, and make it easier for students to get over their bashfulness and to say what they have to say.

To belong to the Club one has only to give his name to the secretary, and to be present at the meetings whenever he can.

All second-year students who take the course in general geology will find the Club meetings a most valuable supplement to the course. Subjects may at the time appear a little too deep, but their explanations will generally appear later in their course, or in some course to be taken next term. The meetings of the Club are only further evidence of the already well-established fact that the best way to get a thorough understanding of geology is not from the study of text-books, but from the hearing and seeing of what prominent geologists have done and how they have done it.

G. F. LOUGHLIN.

The Tech Christian Association.

An organization like the Christian Association, whose work is more or less quietly done, is quite likely to be somewhat neglected and more misunderstood. Under these circumstances an explanation of its purpose and work will not be out of place.

The purpose of the Association is to unite the great disconnected body of moral and religious men at Tech into a moving force, and by giving men work of the right sort to do, to make them more useful to themselves and to the great mass of men into which they will be launched on graduation. The need of these things need not be further emphasized.

To obtain these ends, work of the following nature is done each year: At the beginning of the term the Information Bureau is conducted for the purpose of aiding new men to register and to find suit-

able rooms. Through the year, thoroughly logical courses in Bible study are carried on, the real value of which is unquestionable. The Association conducts a weekly meeting of a devotional character, where men who care to talk intimately on religious topics may get together. A new feature of the work this year is a monthly meeting, where all students can come together and hear reports of the work and talks pertaining to student interests. The relation of a technical man to world-wide religious enterprises is presented through the year in suitable ways. The Association also has a deep interest in the Tech House and co-operates in its social work.

These statements are intended to drive away any misconception that may exist as to the aim and work of the Tech Christian Association. It is, and may be more largely a means of making the Tech man more efficient. There are propositions at Tech that can never be solved except by a band of men such as this, call it Christian Association or what you may. It is no tradition that a few men feel should be kept up. On the other hand, it has a real work to do and a real need to fill. Its work is already known to be efficient, but there are yet fields of usefulness that have never been touched.

Along with a call for a stronger fraternity, and a broader-mindedness in the awakening of the new Tech spirit, comes an urgent call upon the great body of men, who on honest thought can see the far-reaching possibilities of an enlarged Association, for its hearty support. Properly supported by the men on whom the responsibility should reasonably fall, the Christian Association at Tech has unlimited capacity for working for all that is best in our college life.

ARTHUR W. BARTLETT.

Tech Athletics.

Athletic sports at Tech were instituted about 1875, when a football team was organized and track athletics were taken up. Football, a quarter of a century ago, was played very differently than at present. A man either played on the rush line or played back, and the nomenclature of the different positions was hardly known. The various intricate plays existing to-day were not even thought of at that time and the consequence was that the mem-

bers of a team found sufficient time for practice and showed a fair record when they went into a contest.

To-day the conditions governing the game are such that it is almost impossible for any team to make a successful showing during the season unless the men comprising the team give up at least two or three hours a day from the latter part of September, through October and November.

When the Advisory Council was organized, about six years ago, the matter of continuing a 'Stute football team was the most serious question, and after three or four years it was decided to discontinue the same and concentrate the athletic interest on the track.

During the last few years basket ball has become prominent as an indoor winter sport and hockey is also growing in interest. The Advisory Council believe that these two sports should be fostered, and if good results are shown, that they can be made more prominent in the future.

In lawn tennis, the Institute made a good showing last spring, and this and golf being interests which can be concentrated on very few men as regards the competition with other colleges, those in charge of athletic interests feel that they should also receive recognition.

It is but fair to state, however, that both from a moral and financial standpoint, those interested in athletics both within and without the Institute receive no encouragement from the Faculty as a whole. To be sure, individual members of the Faculty may favor the course laid down by the Advisory Council, but this is wholly individual, and cannot be construed as meaning that athletics are favored by the Faculty.

Now, training for the track team or for the basket ball team does not take a man away from his studies or from the work of the Institute to any such degree as football or baseball, and the day will surely come when this will be made apparent to all. Last year, for instance, there were fully seventy-five candidates for the track team, from whom about twenty-five to thirty were finally selected. The record made last year was certainly encouraging, and a great surprise to the other members of the N. E. I. A. A., who had the past records of Tech in mind.

Further than this, the advice and training of a competent director of athletics, such as we have had

for the past two years, showed conclusively in the number of Tech records which were broken, as well as in the results of an evenly balanced athletic team, such as we sent to Hanover and Worcester.

The outlook for the present year is very encouraging, although of the team of last year, athletes who won about half the number of points at Dartmouth, are not at the Institute this year. On the other hand, we have some men who were ineligible last year to compete on account of the "one-year rule," who will surely take the places of some of those who are missing, and, further, since the track at the Tech Oval will be in very much better condition than last year, the results should show in the training of the team.

Negotiations are practically consummated with Dartmouth for a Dual Meet at Boston on May 7, and there is a strong probability that a Dual Meet will be held at Amherst on May 14. The games of the Intercollegiate Association at Worcester will be held on May 21, and there is no doubt but that Tech will make a good showing next spring. Tech will also put in a relay team at the B. A. A. Games, to be held in February at Mechanics Hall, and there will also be a great many individual entries in the games.

Primarily track athletics give the best possible exercise for the minimum amount of work, of any branch which a young man can take up. The training table, under the supervision of the director of athletics, gives a chance for the team to come together daily and interchange suggestions and views, and further, there must be considered this beneficial point, that to many men there is an opportunity thus afforded to learn how to eat and what to eat, in order to keep in good physical condition, which is essential in track athletics.

Athletics at the Institute have surely won the right to receive the proper, adequate support of the student body. The financial end is at present supported wholly from the results of Technology Field Day and from the Tech Show. The students, however, in a general way should give their teams a moral support, not only in track athletics, but in basket ball, hockey, and any other branch which is supported by the Advisory Council, and this can be most easily done by the attendance at the games in Boston in which Tech puts a team.

FRANK H. BRIGGS, '81.

Athletic Conditions at Tech.

The marked success of track athletics at the Institute during the past two and a half years is largely due to the application of the students to the conditions which surround them.

It is true, that the athletic conditions at Tech are humble and limited when compared with the conditions of many other New England colleges, but still, there are many good features of our conditions which we should thoroughly appreciate and use to the best advantage.

The gymnasium has ample room, and is well equipped for indoor athletics. In fact, the gymnasium, although rough and ancient, is still very modern for the very reason that it affords such splendid opportunities for indoor games and athletics. Such indoor exercises, as running, jumping, hurdling, vaulting, basket ball, floor ball, straddle ball, rope jumping, etc., are advocated by the leading exponents of physical culture as a much better and higher type of physical exercise than the older methods of uninteresting drill and apparatus stunts, which are only artificial and contain very little of the spirit and natural exercise of general athletics and games. Thus, we are really favored, instead of handicapped in our gymnasium, and if we continue to apply ourselves to these conditions we are bound to reap good results in the future.

One other advantage for general athletic exercise has recently been added to our facilities, and this is the new athletic field on Irvington Street, which will be in first-class condition in the spring for running, jumping, vaulting, hurdling, etc. What this field lacks in size is well made up in convenience, and affords splendid opportunities for all those wishing out-of-door exercise in the spring and autumn; and so, after careful reflections on our athletic conditions, we must admit that we are very well off, considering the fact that we are in the heart of a great city, and in order to obtain good results from these conditions, we must apply ourselves to them, first, for the general good for which common sense exercise has in relation to a great educational institution; second, with this object first and always in view, that we are sure to obtain a good healthy foundation from which track athletics are sure to be successful.

J. F. MAHAN.

The Track Team.

Last May, with only one Senior on the Track Team, the outlook for this year was very promising, especially, as the team was one which did not depend for its points upon the work of any one star member, but rather on the general good work of the entire team.

In the fall, however, the outlook was not so promising, for of the twenty-two men composing last year's winning team, eight failed to come back. Perhaps mention of some of these will serve to show to what extent the team has been crippled. Franklin, '03, who won first place in the 220-yard dash, and second in the 100-yard and broad jump against Dartmouth, and who broke Tech's record in the 100-yard at Worcester; Riley, '05, holder of Tech's record in the 2-mile run, and who scored the 2-mile at Worcester; Ovington, '04, who won points in the Dartmouth Meet, and won first in the high and low hurdles against Dartmouth, breaking Tech's record in the former, and also scoring at Worcester; Morrill, '05, holder of Tech's record in the discus throw, and who won that event in the Dartmouth Meet, as well as second in the shot-put; Jenkins, '04, winner of the mile run at Worcester; J. W. Williams, '06, winner of firsts in the 40-yard novice and 40-yard handicap at the B. A. A.; Eastham, '05, winner of the bicycle race against Dartmouth, and Mackie, '05, who was second in the pole vault against Dartmouth.

These vacancies have got to be filled mainly from the lower classes. The Fall Meet was very encouraging, as there were 106 different men entered. The winning of the cross country race against Amherst also shows that we have some good distance men in the field. There will be plenty of opportunities for men to win their "Ts" this year. They are, in brief, the relay race at the B. A. A., a possible meet with Brown, April 30, the Meet *vs.* Dartmouth, May 7, Amherst Meet, May 14, and the Worcester Meet, May 21.

Within the last three years ten of the present fourteen records of the M. I. T. A. A. have been made. This good work should be continued. The Winter Meet coming on Jan. 7 will be a good opportunity to get a start, and every man intending to try for the varsity team should enter.

G. A. CURTIS.

The Cross Country Association.

The Cross Country Association has grown from a Hare and Hounds Club, which was founded in the fall of 1896. The initiative for this organization came from V. R. Lansingh, '98, who had been a member of a similar club at a Western college. The purpose of the Club was to hold hare and hounds runs for pleasure and exercise. For five years the Club continued in this work with varying fortunes, holding eight or ten runs each season and usually one handicap cross country race.

The Club started with about twenty men as an average attendance; the organization was very informal, and many good times were enjoyed. Among the early events was the run when the hounds lost their way in crossing the campus of Lasell, not getting home until far into the evening; this run, of eleven miles, is the record for distance. The best attended run for several years was held with several inches of snow on the ground, the runners crossing the campus of Wellesley College twenty-eight strong, and then across Lake Waban on the ice.

Lansingh, '98, was the first captain, followed the next season by H. L. Morse, '99. G. C. Winslow, Jr., '99, and J. H. Batcheller, '00, served the Club as managers in its first two seasons. For the season of 1898-9 Suter, '00, was captain, and Emery, '00, was manager, and the following year Stockman, '01, and Hunter, '02, were the officers. This year saw a low point in the annals of the Club, for the original members had graduated, and few new men had taken their places. Few of the runs that season had over eight or nine men out.

The next year saw a rapid growth. Hunter, who was re-elected as manager, and Pember, '02, who followed Stockman as captain, were successful in getting out new men, and a number of 1904 men, then Freshmen, who started that season, are still leaders in the Association.

The fall of 1901 saw a further advance in numbers and interest. Several runs were held on which there were over forty hounds. Considering that the Club was handicapped by having to go some distance into the suburbs to hold their runs, this record is remarkably good when compared with runs held at other colleges.

At this time the Club entered on a more ambitious policy, that of starting a cross country team.

The impetus for this move came from A. J. Sweet, '04, who before coming to Tech had been captain of the cross country team at Cornell, and was the founder of the Intercollegiate Cross Country Association. The team which the Club put forth was the first Technology team to be sent to a training table.

The season ended in defeat, as the only college which would meet us was Harvard, and her team, led by the famous distance runner, Eddie Mills, proved too strong. However, the running of Tech's captain, Peaslee, '03, and Riley, '05, proved the possibilities of Technology athletes.

During the following winter the Hare and Hounds Club was merged in the present Cross Country Association, with Jerry Sweet, president, as a stronger organization was needed to take charge of both the pleasure running and the racing.

The new management started in with a handicap race in the spring of 1902, which was won by Ovington, '04, and another that fall won by Thurber, '06, though no team race could be arranged with another college. Hare and hounds running, however, has continued with unflagging interest, and gives promise of becoming one of the most popular forms of sport at Tech. The victory over Amherst, too, has set cross country racing on a firm basis, the support given Captain Lorenz and Manager Myers by the student body showing that there is a field for athletics here after all.

The Association has at present a membership of over a hundred, and the prospect of a long future in its double purpose of furnishing Tech men with enjoyable exercise by hare and hounds runs, and of turning out each fall a team worthy to represent Tech in cross country races.

A. M. HOLCOMBE.

Junior Prom.

Among the many questions coming before the Junior Class this year is that of the "Prom." In order to make this affair a complete success, it is necessary for those who are to manage it to have plenty of time, and the earnest co-operation of the whole Class. Without able management and support, the Prom will not hold its place as the leading social function of Junior Week. This question will come up at a class meeting to be held immediately after the Christmas vacation, and every man should be present.

Tech 16 — Holy Cross 12

The Tech Basket Ball Team defeated Holy Cross in the Holy Cross gym. at Worcester Saturday, by a score of 16 to 12. This is Tech's second victory this year. Holy Cross has never been defeated before in her gym., and great credit must be given the Tech team for its splendid showing.

Holy Cross played a very rough game, and twelve fouls were made by them. Blake took advantage of these by throwing six baskets from the foul line. The game started with a goal from foul by Blake, and the score see-sawed back and forth during the half, leaving the score 11-9 in favor of Holy Cross at the end.

In the second half Wiggin took the place of Captain Schonthal, who withdrew on account of a slight injury. Holy Cross immediately made a goal from the foul line. Score: Holy Cross 12, Tech 9. Tech then braced, and prevented Holy Cross from scoring again. Blake threw a goal from the foul line, followed by a goal from field by Ager, leaving score 12-12. Blake threw two more goals from the foul line, and then, with less than one minute to play, made two more points and clinched the game. Blake was the bright and shining star for Tech, and Ager and Wiggin covered in excellent shape during the second half. Burleigh played a plucky game at centre, and Mathison and Schonthal played their positions to perfection. Quigley and Spring excelled for Holy Cross.

SUMMARY.

Tech.	Holy Cross.
Blake, l. f.	r. g., Reed
Mathison, r. f.	l. g., Welch
Burleigh, c.	c., Tobin
Ager, l. g.	c., Spring
Schonthal, r. g.	r. f., Quigley
Wiggin, r. g.	l. f. { Spring Doherty Dowd

Score: Tech 16, Holy Cross 12. Goals made by Blake 2, Mathison, Burleigh, Ager, Spring 3, Quigley, Welch. Goals from fouls: Blake 6, Spring 2. Fouls made by Quigley 5, Spring 2, Doherty 3, Dowd, Reed, Ager 3, Mathison. Referees, Haniby, Wiggin. Umpires, Haniby, Schonthal. Timers: O'Neil, Holy Cross; Luther, Tech. Scorers: Devlin, Holy Cross; Goldthwaite, Tech. Time: two twenty-minute halves.



NATIONAL.

Dr. Edward Everett Hale has received the appointment of chaplain of the United States Senate. Dr. Hale was planning to spend the winter in Washington, and Senator Hoar suggested his appointment as chaplain, a suggestion which was enthusiastically carried into effect.

The Republican National Committee has decided to hold the next Republican Convention in Chicago, and noon of June 21 has been fixed as the time for the meeting of the Convention.

The President has sent to the Senate the nomination of W. I. Buchanan of New York to be United States minister to Panama. Mr. Buchanan has done very efficient work as minister to the Argentine Republic, an appointment received from President Cleveland and in which he continued under President McKinley.

Several hundred United States marines and sailors were landed in Guantanamo, Cuba, marking the formal occupancy of the place as a United States naval station.

Senator Hanna has made a formal demand that General Wood be called home from the Philippines so that he could be examined as to his conduct in Cuba.

FOREIGN.

The United States Consul at Alexandretta, Asiatic Turkey, was insulted and assaulted by the local police, the affair growing out of the arrest of an Armenian who was a naturalized American citizen. The flag over the consulate has been hauled down and Consul Davis has left the city.

During the past week there has been a movement of Columbian troops toward the Isthmus, but the United States forces were ready to guard against any invasion, and the movement appears to have stopped almost as soon as it started.

The new republic of Panama has been recognized

by Denmark and by Austria-Hungary. It is reported that both Holland and Great Britain insist that Panama shall assume liability for \$15,000,000 of the Colombian debt.

GENERAL.

Herbert Spencer, the philosopher, died at Brighton, England, on Dec. 8. He was one of the famous Victorian quartet, made up of Darwin, Tennyson, and Huxley, which largely revolutionized modern thought. His Synthetic Philosophy is based upon the truths of physics, and it attempts "to interpret the detailed phenomena of Life, and Mind, and Society in terms of Matter, Motion and Force."

The six-day bicycle race in New York was won by Walthour and Monroe. Leander and Butler were second.

D. J. Hurley has been elected captain of the Harvard football team for next year.

Calendar.

THURSDAY, DECEMBER 17.

- 4:15 P.M. GYMNASIUM CONTEST. Putting sixteen-pound shot. One point for each four inches over 29 feet.
 4:30 P.M. GEOLOGY LECTURE. Fourth and last of the series being given by Dean Shaler.
 7:30 P.M. CIVIL ENGINEERING SOCIETY Smoker at the Union. Dean Burton will speak on the "1903 Summer School."

FRIDAY, DECEMBER 18.

- 2 P.M. GENERAL CONVOCATION in Huntington Hall. All exercises postponed until 2:30.
 8:00 P.M. M. I. T. GLEE, BANJO, AND MANDOLIN CLUBS. Annual Winter Concert and Dance, New Century Building, Huntington Avenue. Tickets for concert fifty cents, for concert and dance one dollar.
 8 P.M. AMERICAN CHEMICAL SOCIETY Meeting at the Union.
 8 P.M. CHESS TEAM vs. HARVARD. Metropolitan Chess Club.

SATURDAY, DECEMBER 19.

- 1 P.M. CHRISTMAS VACATION BEGINS.
 6 P.M. REGULAR INFORMAL DINNER at the Union. Tickets twenty-five cents, from Mr. Powers.

MONDAY, DECEMBER 28.

- 9 A.M. CHRISTMAS VACATION ENDS.



It would seem fairest to Mr. Sothern to compare *The Proud Prince* with *If I Were King*. In both Mr. McCarthy takes a story from the Middle Ages, avails himself of the medieval beauty and gorgeousness of costume and ceremonial, and produces a spectacular romantic melodrama. The later play is in perhaps every possible way inferior to the first. The plot of *If I Were King* was a consistent portrayal of a strongly dramatic situation, that of *The Proud Prince* tangles things only for the effect of the miraculous solution. The characters of Villon, of the Abbess, of the King, even of the rather conventional heroine in the first play, were individual and real, compared with the puppets of this, who piously or villainously dance their little parts until the angel comes along, fairy-book fashion, to arrange with propriety the happy forever after. The taste and atmosphere of the earlier piece were far superior to this, for although the Abbess and the brutal companions of Villon's low life were the dregs of France, those scenes were vigorous and decent, compared with the offensive ineffectiveness of the silly second act of this play. And artificially theatrical as was the whole make-up of *If I Were King*, there was some beautiful scenery and poetry in the romantic situation and in the words of the text; *The Proud Prince* is in comparison only Bowery rant tempered with conventional moralizing.

Mr. Sothern's alternately growling and howling and whimpering impersonation of the Prince, as well as the acting of the other parts, is really quite as good as the play deserves.

The Show.

The management of the Tech Show wishes to announce that all men desiring to try for positions on the management should, before January 1, address a letter to the management, Box 23, "Cage," containing the following information: (1) name; (2) department trying for (whether business, stage, or press); (3) previous experience; (4) standing at last final examination.

The positions are open to all classes and will be awarded by competition.

Tech vs. Boston University.

The Basket Ball Team succeeded in winning the game with Boston University by a score of thirty-five to eighteen. The game took place Tuesday, the 8th, in our gymnasium, and was fairly well attended. The Boston University team was quick, and heavier than ours. The team work on both sides was good. The University was able to make fully as many trials for goals as our team, but many of their attempts failed, so that their defeat was due mainly to superior goal tossing on the part of the Tech men.

All the men on both teams did well, but Moody and Tucker for Boston University and Mathison and Blake for Tech deserve special commendation for their goal tossing.

TEAMS.

Boston University.

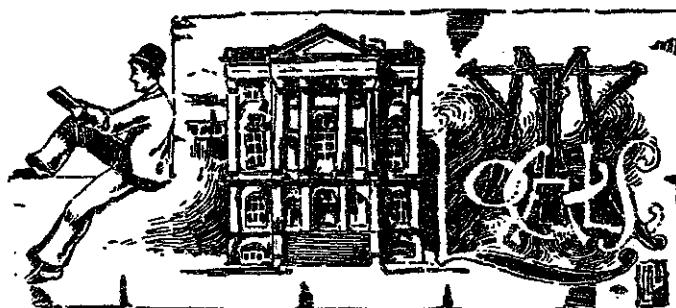
	M. I. T.
Sleeper, '06 {	Blake, '06
Tucker, '07 }	Mathison, '06
Moody, '07	Moffatt, '06
Keith, '06	Burleigh, '06
Gillon, '06 (Capt.) }	Ager, '04
	{ Schonthal, '05 (Capt.)

SUMMARY.

Score: M. I. T. 35; Boston University 18. Goals from floor, Mathison 6, Blake 4, Ager 3, Moffatt 3, Moody 3, Tucker 3, Keith 2, Schonthal, Sleeper. Goal from free try, Mathison. Referees: Speare, Boston University; Keen, '05, Bartlett, '05, M. I. T. Timekeeper, Coach Mahan. Scorer, Goldthwaite. Time, twenty minute halves.

Chess Team vs. Harvard.

Last Friday evening the Chess Team played an informal match with the Harvard University Team at the Harvard Union. Ten games were played, the Harvard team winning all but one. This was the game between Lourie and Bridgeman, which was won by Lourie after a close contest. Several of the other games were also close; two, indeed, were unfinished when it became too late to continue playing. The Tech men, Hill and Edmunds, were, however, at a disadvantage, and so resigned. The team is to play Harvard again in a Metropolitan League Match, Friday evening, at the rooms of the Boston Chess Club.



D. G. Robbins has been elected to the business staff of TECH.

R. C. Brady, formerly a member of the Class of 1905, has been elected president of his class at Annapolis.

Professor Sedgwick spoke on "Science and Health" before the Massachusetts Schoolmasters' Club last week.

Professors Vogel and Rambeau were present at a meeting held last week to organize the New England Modern Language Association.

Any man rated '05 who has not received a question blank for Class statistics of *Technique*, 1905, should leave his name and address at the "Cage" at once, for Amberg or Marcy.

Two more ensigns and a midshipman are now taking a course at Tech prior to their final graduation from the United States Naval Academy at Annapolis. These men make a total of twelve from the Academy now receiving instruction at Tech, but it is understood that the Navy Department will diminish the number within a few years.

Mr. John F. Mahan, director of athletics, under instructions of the Advisory Council, has obtained over 600 bushels of arc cinders, and placed them on the tracks at the Tech Oval. The winter weather will do the rest, and when the track is opened in the spring we ought to have one of the best running tracks of its size in New England.

Mr. C. S. Peirce, the eminent scientific investigator, gave a very interesting talk on the "Relation of the Sciences" at the Technology Club Monday afternoon. Graduate students and others interested were invited, and the large common room of the Club was completely filled. Mr. Peirce first spoke of mathematics as being a branch of science necessary to all the others. From a sketch of some of the less understood mathematical subjects he led on to the history of some of our most important manuscripts, and, finally, to an analysis of the methods of inductive reasoning.

Engineering Excursions.

In making an excursion through an industrial plant of some size, one sometimes experiences a sensation of bewilderment, followed by the remark, "What is it all about?"

A brief outline of what may be seen at some of the interesting plants around Boston may be of some help to the mechanical engineers of the future.

On Cow Pasture Point, Dorchester, is situated the Boston Main Drainage Station. It is easily found by taking a Dorchester Avenue car, getting off at Mt. Vernon Street, and walking about a mile across the marsh.

The engines are of the vertical compound type. The horizontal duplex pumps are of especial interest. The boilers are horizontal, of the locomotive type. A Greene economizer heats the water on the way to the boiler by means of hot flue gases. The men in charge will gladly explain the sewage conduits and screens. Don't forget to ask about the "cemetery." This trip will be pleasantest if taken on a sunny day at high water.

Another very interesting plant is the Metropolitan Sewage Pumping Station. Go by the elevated to Sullivan Square, and transfer to an Everett or Malden car. The station is just this side of Mystic River, about three minutes' ride from Sullivan Square.

The station has triple expansion Reynolds Corliss engines, with a vertical shaft operating a submerged centrifugal pump. The pump receives sewage under a slight head, and discharges it against a low head, forwarding the sewage to an outlet at Deer Island.

Question the men in charge about supporting the weight of the pump and shaft. Notice a thrust bearing, and the method of lubricating it. Only one crank is used. Notice the loci of "crank pins" of high and low pressure cylinders. There is an air-pump on the tail rod of the intermediate cylinder. The boilers are return tube with economizer. A similar station to the one just described may be seen in East Boston. The engines used in this station are illustrated in the thesis of E. A. Gallison, '98, Course II.

The following is a trip which may be taken by two or three men:

The engine room of the Board of Trade Building at the corner of State and India Streets, Boston. The janitor must be found to conduct you to the basement. The main point of interest is the hydraulic elevator system. Compound duplex pumps may be seen, of the centre packed type. Note a good arrangement of suction air chambers. The hydraulic plungers under the elevators are similar to those used in Hotel Westminster.

Tech House.

Tech House was opened the last week in September. Six men took up their residence in the House, and in answer to personal invitations and in reply to a circular sent to all Tech students, between eighty and ninety men volunteered to do work in connection with this social settlement. The location of the House is most happy for the work undertaken. It stands in the midst of an industrial and tenement house district, where educational and learning influences are few.

Several organizations for furthering social work were promptly absorbed by Tech House, so that it already has more than thirty clubs and classes projected, and a dozen others in process of forming. Plans for a scientific economic investigation are maturing, and the work will begin with the new year.

The people of the district are of a type that present many individual characteristics. They need to be seen close to be appreciated, and studied well to be understood. The only successful men's club in Boston is associated with Tech House, and the peculiarities as well as the fine qualities of these working men are all seen to good advantage in this Club.

The boys' work is, perhaps, of first importance. The boys' clubs connected with the House number nearly a score. Each club has from eight to twenty members. As a rule, each club was, or is a street "gang," unbroken and unmixed. The natural organization of the boys is always best in social work. The hardest thing for Tech men to learn in connection with these clubs is that a boy's intelligence and not his ignorance must be appealed to. If a boy understands checkers, or hockey (with a milk can stopper for a puck) better than music or stereotomy, it is but natural. Therefore, begin by playing checkers with him; play fair, show him what it means to play for the sake of the game and not for the sake of winning, merely. Encourage him at his hockey till you have won his confidence and friendship, and then, perchance, you will make of him a useful member of society some day — at least a good carpenter, or mason, or stone-cutter, if not a great bridge builder. No small boy can be put into a mathematical formula. He is a law unto himself. More often than not he must be tamed and civilized before he can be taught. He is not an invariable aspirant to the court and high places of the world. He is

plain, everyday human nature — in the rough. He needs moulding and fashioning. In the parish of Tech House there are few influences at work, so here it is that Tech men have their opportunity to do good work and at the same time see of what stuff they themselves are made.

It is not to "neighborhood" work alone that Tech House is devoted, for it already has its civic interests. Tech House was influential in securing a hearing before a committee of the Boston School Board. This hearing was in behalf of the movement making provision for the evening use of school-houses for educational and social purpose.

Thus in three months a most encouraging start has been made, and the progress thus indicated harbingers well for the future.

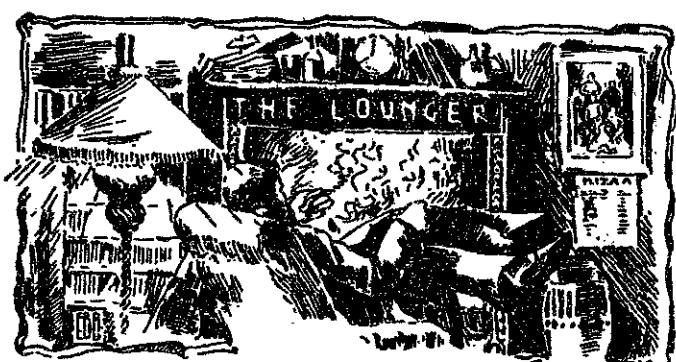
Conference at the Technology Club.

There was a conference of the Faculty with teachers from secondary schools at the Technology Club last Saturday for the purpose of making known certain changes which had been decided upon. Representatives were present from about fifty public and private schools around the city. The Institute was represented by President Pritchett, the heads of departments, and the Faculty committees on entrance requirements and on secondary schools.

There was an informal discussion of the question of a new requirement in physics and of the new rule allowing candidates to divide their examinations between June and September of the same year.

Saturday Nights.

Out of about seventy men at the Union last Saturday night, only twenty-four men, or about one-third, had bought their tickets in advance. It is only fair to those in charge to get a ticket beforehand, for it is in this way, and only in this way, that it is possible for them to figure on how much to provide in the way of supplies. There is no money to risk in buying extra supplies which will be wasted if enough men do not appear. If, then, there has ever been any fault to find, the fact that on this occasion only one-third of the guests were expected, shows the management to be blameless. An unused ticket can always be exchanged for another of the following week, so that there is no reason whatever for not buying a ticket in advance. Mr. Bullard is a very frequent visitor at the dinners now, and lends an added interest. The singing is practice of which all men should avail themselves as often as possible. We should know our Technology songs by heart, and Mr. Bullard has been and is striving to the end that we shall. If any man desires the experience of some good Tech spirit, the place to find it is at one of the Saturday night dinners. And let him be sure to get a ticket in advance.



The celluloid hair-brush and manicure set, in a blue plush case lined with yellow satin, is with us again. The Christmas season has come. THE LOUNGER has nerved himself up to the point where an impossible box of stationery in tiers, tied with ribbon, a pair of slippers that slip altogether too much, and a leather-covered book of Arabian verses by Oma Kiyi, are missiles as harmless as soft red roses, tossed by the arms of beautiful young girls in the path of the victorious hero returning. Even a hero, however, draws the line at a hand-painted necktie or a pair of burnt-work suspenders; and THE LOUNGER has strong suspicions that some of his sisters (once removed) are planning such pleasant surprises for him. That's what comes from making a present of a year's subscription to the *Ladies' Home Journal*, with its "Five Hundred Suggestions for Christmas Gifts." It is a question if the intensely refining influence of the very, very nice *Lady from Philadelphia* is not offset by the dark outlining of plans for countless handkerchief cases, postal-card holders, and cigar racks.

* * *

The rumor lately circulated that the lunchroom was to add another dish to its already extensive menu, has been proved false. It is true that the lunchroom committee met recently to consider the advisability of adding fried potatoes to the bill of fare on Tuesdays, but no action was taken on account of Professor Dewey's absence.

* * *

THE LOUNGER hereby disclaims all responsibility for the wild posters that have appeared lately around

the Institute proclaiming the fact that the editors of THE TECH are unwinged angels in publishing for the good of the student body a special Christmas number, when they might, if they chose, be sipping wine and swapping jokes with Editor Harvey or with Billy Hearst himself. Advertising in a ladylike way is all well enough. If THE TECH, for instance, had organized a prize contest in which the contestant was to approach a stranger and say: "Good morning, have you read THE TECH?" — this, THE LOUNGER claims, would be effective, provided the contestant survived. One of these atrocities on a tree was almost treason; it read:

This tree, if it could but speak,
WOOD BARK
for the Christmas TECH.

When THE LOUNGER came up to it, he noticed a man half seas over intently reading it over and over, as if its philosophy was just beyond his mental grasp. "Say, Charley," said he to THE LOUNGER, "do you believe that?"

"I certainly do not," said THE LOUNGER, "although it is quite a poplar chestnut."

"Shake, old man," said the gentleman of the bar with a beatific smile. "I don't believe it, neither," said he. "That ain't no dogwood."

The moral of this is very plain. It shows that this kind of crude and senseless advertising appeals only to the person who has lost the upper half of his reasoning power. Let us then be careful.

* * *

The editors of *Technique* have requested THE LOUNGER to make the following announcement: All professors and instructors are politely requested to run through their stock of jokes and witty sayings in class not later than the fifteenth of March, when the final copy for the "Grinds" is closed. If they will send a schedule of these *bons mots*, together with a list of dates when they are to be exploded, THE LOUNGER will send to the spot at the given time a reporter — and an interpreter.

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see page iii

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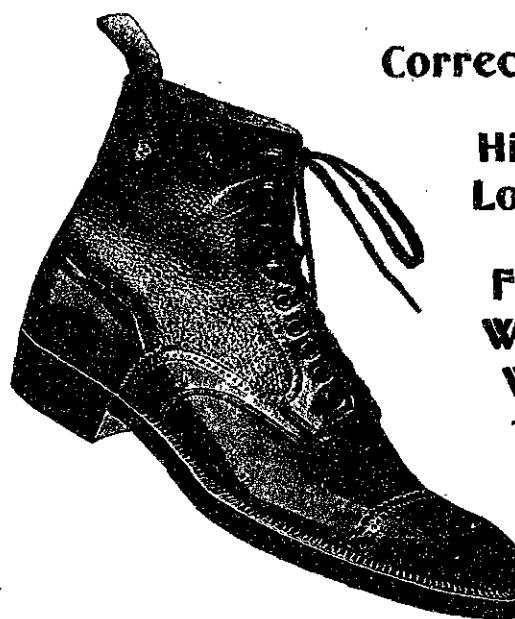
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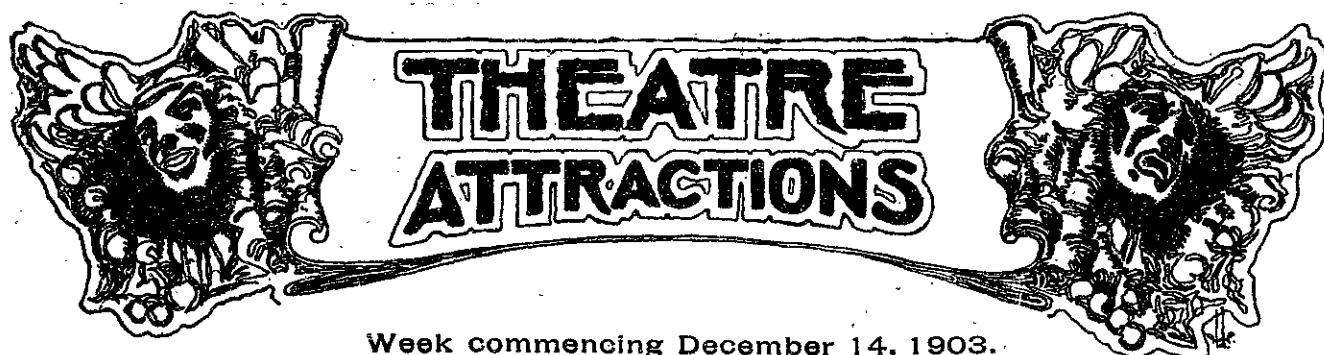
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Special Room for Ladies**HEWINS & HOLLIS,**
4 HAMILTON PLACE, - BOSTON.**MEN'S FURNISHING GOODS****L.P. Hollander & Co.****Great Sale of Men's
Suits and Overcoats**Men's Sack Suits - - \$10.00
Formerly \$20.00 and \$24.00Men's Sack Suits \$18.00 to \$24.00
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Formerly \$22.00 to \$45.00**208 Boylston Street****The Official Tech Pin.**Gold Plated on Silver, \$1.00.
Gold, \$2.50. Silver, 75 cents.Frederick T. Widmer,
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Week commencing December 14, 1903.

Tremont Theatre.—Fifth big week of Blanche Bates in "The Darling of the Gods," a drama of Old Japan, by David Belasco and John Luther Long, direct from its run of two seasons at the Belasco Theatre, New York. A superb cast of more than one hundred people. Matinees Wednesday and Saturday.

Colonial Theatre.—Two weeks' engagement of Richard Carle and company in the comic opera, "The Tenderfoot," direct from its successful run at the Dearborn Theatre, Chicago. One glorious, vivid splash of new, breezy Western wit and music. Matinees Wednesday and Saturday at 2. Extra matinee Christmas Day.

Majestic Theatre.—Last week of "The Earl of Pawtucket," with Lawrence D'Orsay, and a cast of exceptional merit. This play has met with a great success during its engagement here, and any one who has not as yet seen it should do so. Matinees Wednesday and Saturday at 2.

Hollis Street Theatre.—Limited engagement of E. H. Sothern in the "Proud Prince," a drama, by Justin Huntly McCarthy, author of "If I Were King." Mr. Sothern's company includes: Cecilia Loftus, Wm. Harris, Mary Hall, John Findlay, Rowland Buckstone and others. Only matinee Saturday at 2.

Globe Theatre.—Third week of the musical comedy, "An English Daisy," with an all star cast, including John C. Rice, Christie MacDonald and Charles Bigelow. A new production by Weber & Fields, which has set Boston aflame with enthusiasm.

Park Theatre.—Third week of the English musical comedy, "My Lady Molly," by the authors of "San Toy," "The Geisha," etc. This play is not up to the standard of modern musical comedies, and is far inferior to the other plays written by the same authors.

Castle Square Theatre.—"The Octoroon" is being presented this week at this playhouse. Next week, "Dairy Farm."

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TIN CRYSTALS	BISULPHITE SODA
IRON LIQUORS	ALUM
STAUNATE SODA	POOROUS ALUM
MURIATE TIN	SULPHATE ALUMINA
AQUA AMMONIA	CHLORIDE ALUMINA
SULPHATE AMMONIA	NITRATE COPPER
EXTRACT INDIGO	SULPHIDE SODIUM

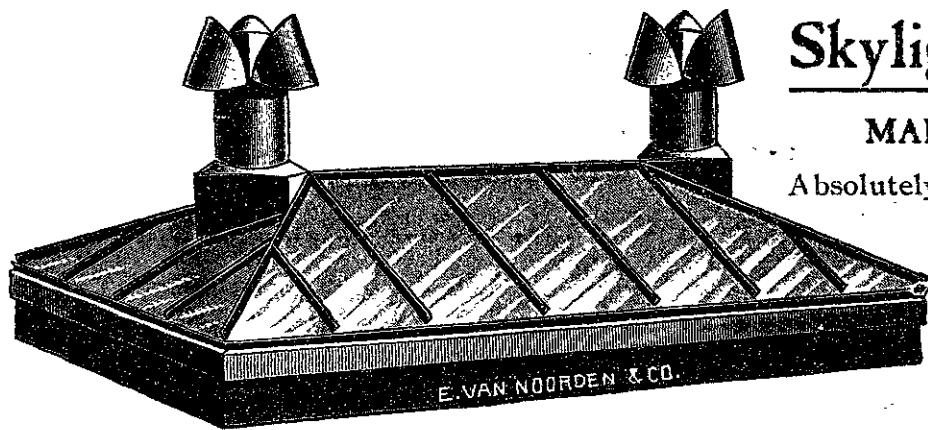
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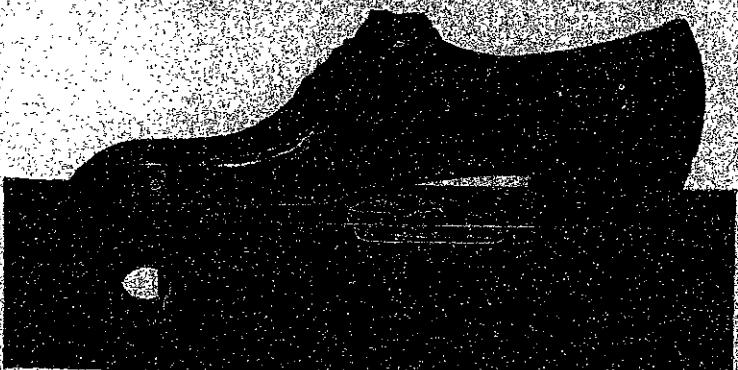
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